

12-5 Skills Practice**Adding Probabilities**

Eli has 10 baseball cards of 10 different players in his pocket. Three players are pitchers, 5 are outfielders, and 2 are catchers. If Eli randomly selects a card to trade, find each probability.

1. $P(\text{pitcher or outfielder})$ 2. $P(\text{pitcher or catcher})$ 3. $P(\text{outfielder or catcher})$

A die is rolled. Find each probability.

4. $P(5 \text{ or } 6)$ 5. $P(\text{at least a } 3)$ 6. $P(\text{less than } 4)$

Determine whether the events are *mutually exclusive* or *inclusive*. Then find the probability.

7. A die is rolled. What is the probability of rolling a 3 or a 4?
 8. A die is rolled. What is the probability of rolling an even number or a 4?
 9. A card is drawn from a standard deck of cards. What is the probability of drawing a king or a queen?
 10. A card is drawn from a standard deck of cards. What is the probability of drawing a jack or a heart?
 11. The sophomore class is selling Mother's Day plants to raise money. Susan's prize for being the top seller of plants is a choice of a book, a CD, or a video. She can choose from 6 books, 3 CDs, and 5 videos. What is the probability that Susan selects a book or a CD?

A spinner numbered 1–10 is spun. Find each probability.

12. $P(\text{less than } 5 \text{ or even})$ 13. $P(\text{even or odd})$ 14. $P(\text{prime or even})$

Two cards are drawn from a standard deck of cards. Find each probability.

15. $P(\text{both red or both black})$ 16. $P(\text{both aces or both red})$
 17. $P(\text{both 2s or both less than } 5)$ 18. $P(\text{both black or both less than } 5)$

For Exercises 19 and 20, use the Venn diagram that shows the number of participants in two different kinds of aerobic exercise classes that are offered at a health club. Determine each probability if a person is selected at random from the participants.

19. $P(\text{step aerobics or jazzercise, but not both})$

20. $P(\text{step aerobics and jazzercise})$

